ability of an oligonucleotide to hybridize thereto under high stringency conditions and wherein ~~said oligonucleotide~~ is selected from SEQ ID NOS:6 to 10.

REMARKS

In the Official Action dated October 10, 2001, the Examiner has alleged that the oath and declaration is defective. The Examiner alleges that the title is not descriptive. Claims 1, 3, 4, 5, 8, 9, 11 and 12 have been rejected under 35 U.S.C. §112, first paragraph as allegedly lacking enabling support. Claims 1, 3-5, 9, 11-12 and 26-29 have been rejected as allegedly lacking descriptive support. Claims 1, 9, 12 and 26 have been rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Claims 1, 3, 4, 5, 8, 9 and 11 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by WO 96/19574. Claims 12 and 29 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by Gorman et al. (1992) J. Biol Chem: 267(22):15842-15848 (hereinafter "Gorman et al.").

This response addresses each of the Examiner's objections and rejections. Accordingly, the present case is in condition for allowance. Favorable consideration of all pending claims is respectfully requested.

The Examiner has objected to the original declaration. Applicants will provide a substitute declaration in compliance with 37 C.F.R. §1.67(c) in due course. The title has been objected to as allegedly non-descriptive. In response, Applicants have amended the title to reflect the invention to which the claims are directed.

Claims 1, 3, 4, 5, 8, 9, 11 and 12 have been rejected under 35 U.S. §112, first paragraph, as allegedly lacking enabling support. The Examiner admits that the specification is enabling for "an isolated nucleic acid molecule of SEQ ID NO:4 which encodes an α chain of human IL-11 receptor having an amino acid sequence comprising SEQ ID NO:5".

The Examiner specifically alleges that the specification does not provide enabling support for "an isolated nucleic acid molecule comprising a sequence of nucleotides encoding an IL-11 receptor α chain mutant, derivative, component, part, fragment, homologue, analogue, or a peptide or polypeptide equivalent thereof".

Claims 9 and 12 have also been rejected as allegedly overbroad considering the state-of-the-art and the number of nucleic acid molecules capable of hybridizing to SEQ ID NO:4 under low stringency conditions. In response, and in an effort to expedite favorable prosecution, Applicants have amended claims 1, 9 and 12. Specifically, claim 1 now recites an isolated nucleic acid comprising a sequence of nucleotides encoding an α chain of human IL-11 receptor comprising SEQ ID NO:4 or a nucleotide sequence capable of hybridizing to SEQ ID NO:4 or its complement under high stringency conditions.

Support for the amendment to claim 1 is found throughout the specification and particularly at page 34, Example 17. Moreover, the hybridization language of claim 9 has been deleted. Claim 9 now specifically defines the nucleic acid molecule as comprising a nucleotide sequence as set forth in SEQ ID NO:4.

With regard to claim 12, the Examiner specifically alleges that "Claim 12 is extremely broad...[and] there is not enough guidance [in the specification] to make certain that any of these nucleic acid molecules will encode a polypeptide with characteristic features of the IL-11 receptor".

In response, Applicants respectfully submit that the claims, as amended, are directed to nucleic acid molecules that encode an IL-11 receptor α-chain. These nucleic acids are further defined as having the ability to hybridize to specific oligonucleotides under medium and/or high stringency conditions. Accordingly, the metes and bounds of the claims, as

amended, are in full compliance with the requirements of 35 U.S.C. §112, first paragraph. Claim 30 has been added to further define the invention to which Applicants are entitled. Support for claim 30 is found throughout the specification and particularly at page 34. No new matter has been added.

Furthermore, Applicants submit that the specification provides sufficient guidance to determine whether a nucleic acid molecule will encode a polypeptide with characteristic features of the IL-11 receptor. The Examiner's attention is respectfully directed to the Examples, and in particular Examples 10, 12, 13, 15 and 16. The Examples permit the skilled artisan to determine, without undue experimentation, whether a nucleic acid sequence encodes a polypeptide with characteristic features of an IL-11 receptor. Example 10 describes the analysis of the deduced amino acid sequence that identifies motifs, domains and conserved residues characteristic of hemopoietin receptors. Examples 12, 13, 15 and 16 provide cell-based binding studies and further sequence analyses that confirm that the nucleic acid sequence encodes an IL-11 receptor.

Claims 26-29 have been rejected under 35 U.S.C. §112, first paragraph as allegedly lacking descriptive support. In response, Applicants have canceled claims 26, 28 and 29 without prejudice, thereby rendering the Examiner's rejections moot. Applicants observe that claim 27 has previously been cancelled by way of a Preliminary Amendment submitted on March 22, 2000.

Claims 1, 3-5, 8, 9, 11, 12, 26, 28 and 29 have been rejected as allegedly lacking descriptive support. The Examiner specifically alleges that "the written description is not commensurate with an isolated nucleic acid molecule comprising a sequence of nucleotides encoding an IL-11 receptor mutant, derivative, component, part, fragment, homologue, analogue,

or a peptide or polypeptide equivalent thereof..." In response, as indicated above, Applicants have amended the claims to clarify the subject matter to which Applicants are entitled.

Accordingly, the rejection of claims 1, 3-5, 8, 9, 11-12 and 26-29 under 35 U.S.C. §112, first paragraph is overcome and withdrawal thereof is respectfully requested.

Claims 1, 9, 12 and 26 have been rejected as allegedly indefinite under 35 U.S.C. §112, second paragraph. Claims 9 and 26 have been specifically rejected because of the recitation "capable of". In response, claim 26 has been cancelled without prejudice and the phrase "capable of" has been removed from claim 9.

The Examiner has alleged that claim 1 is indefinite in reciting "derivative, component, part, fragment, homologue, analogue and polypeptide equivalents". Inasmuch as such recitation has been removed from claim 1, the Examiner's rejection is rendered moot.

Claim 9 and 12 have been rejected based on the phrases "low stringency" and "medium stringency". In response, Applicants have further defined the parameters of the stringency conditions consistent with the disclosure found in the specification. Specifically, the claims now recite only specified medium stringency conditions. The amendments to claim 9 and 12 are consistent with the Examiner's recommendations.

Accordingly, the rejection of claims 1, 9, 12 and 26 under 35 U.S.C. §112, second paragraph is overcome and withdrawal thereof is respectfully requested.

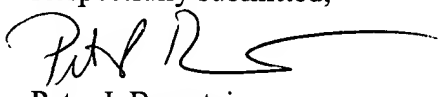
Claims 1, 3, 4, 5, 8, 9 and 11 have been rejected under 35 U.S.C. §102(b) as allegedly anticipated by WO 96/19574. Applicants observe that WO 96/19574 bears a publication date of June 27, 1996. The present application is entitled to an International priority date of September 5, 1994. Thus, Applicants respectfully submit that the rejection based on WO 96/19754 is *prima facie* improper and withdrawal thereof is respectfully requested.

Claims 12 and 29 have been rejected as allegedly anticipated by Gorman et al. Applicants submit that the claims, as amended, are neither taught nor suggested by Gorman et al. Thus, the rejection of claims 1, 3, 4, 5, 8, 9, 11, 12 and 29 under 35 U.S.C. §102(b) is overcome and withdrawal thereof is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with Markings to Show Changes Made."**

Thus, the present application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The following title has been amended as follows:

~~A NOVEL HAEMOPOIETIN RECEPTOR~~

INTERLEUKIN-11 RECEPTOR

IN THE CLAIMS:

Claims 1, 5, 8, 9 and 12 have been amended as follows

1.(Amended) An isolated nucleic acid molecule comprising a sequence of nucleotides encoding ~~or complementary to a sequence encoding~~ an α chain of human Interleukin (IL)-11 receptor ~~or a mutant, derivative, component, part, fragment, homologue, analogue or a peptide or polypeptide equivalent thereof~~ wherein said nucleic acid molecule comprises the nucleotide sequence ~~said IL-11 receptor comprises an amino acid sequence~~ as set forth in ~~SEQ ID NO 1:~~

~~Trp-Ser-Xaa-Trp-Ser,~~

~~wherein Xaa is any amino acid~~ SEQ ID NO:4 or a nucleotide sequence which hybridizes to SEQ ID NO:4 or its complementary form under high stringency hybridization conditions.

5.(Amended) ~~An~~ The isolated nucleic acid molecule according to claim ~~4~~1 wherein the nucleic acid molecule is DNA.

8.(Twice Amended) ~~An~~ The isolated nucleic acid molecule according to claim 5 wherein the nucleic acid molecule encodes an ~~α-chain of human IL-11 receptor having an~~ amino acid sequence comprising SEQ ID NO:5.

9.(Twice Amended) ~~An~~ The isolated nucleic acid molecule according to claim 8 wherein said nucleic acid molecule comprises ~~SEQ ID NO:4 or is capable of hybridising thereto under low stringency conditions~~ a nucleotide sequence set forth in SEQ ID NO:4.

12.(Amended) An isolated nucleic acid molecule comprising a sequence of ~~DNA~~ nucleotides which encodes a mammalian IL-11 receptor α –chain, said nucleic acid molecule further defined by the ability of an oligonucleotide to hybridisze thereto under medium stringency conditions and wherein said oligonucleotide is selected from SEQ ID NOS:6 to ~~SEQ ID NO:~~10 ~~or a complement sequence thereof~~ wherein said medium stringency conditions comprise 0.25-0.5% w/v SDS at greater than or equal to 45°C for 2-3 hours.